

Table 9.--Analyses of as-received grab samples from U12n.03 drift

[Analyses by U.S. Geological Survey laboratory;
leaders, ---, indicate not tested]

Sample depth (feet)	Rock unit	Lithology	As-received density (g/cm ³)	Dry-bulk density (g/cm ³)	Grain density (g/cm ³)	Saturated density (g/cm ³)	Porosity (percent)	Moisture content (weight percent)	Shore hardness	Schmidt hammer R (rebound value)	Static (Three samples taken from a 6-in core drilled along three mutually perpendicular axes x, y, and z; z is parallel to the core length)					Sonic (Three samples taken from a 6-in core drilled along three mutually perpendicular axes x, y, and z; z is parallel to the core length)							
											Unconfined compressive strength (kbars)	Young's modulus (kbars)	Shear modulus (kbars)	Poisson's ratio	Bulk modulus (kbars)	Compressional velocity (m/s)	Shear velocity (m/s)	Poisson's ratio	Young's modulus (kbars)	Shear modulus (kbars)	Bulk modulus (kbars)		
CS 12+50	Tt 4K	ash-fall tuff	1.87	1.58	2.39	1.92	34	16	24.5	31	x 158.6 y 144.8 z 172.4 ² 89.6	x 34.5 y 31.7 z 37.2 ² 28.3	x 14.5 y 13.1 z 15.9 ² 13.8	x 0.17 y .22 z .16 2.04	x 17.9 y 19.3 z 17.9 ² 10.3	x 4,411 y 2,775 z 2,264 ² 2,067	x 1,666 y --- z --- ² 2832	0.30 2.40	136 229	52 210	117 250		
CS 11+57	Tt 4K	do.	1.84	1.61	2.48 ¹ 2.44	1.96 ¹ 1.95	35 ¹ 34	12.5	11.8	15	---	---	---	---	---	---	---	---	---	---	---	---	---
CS 10+94	Tt 4K	do.	2.08	1.69	2.39	1.98	29	19	17.7	44	x 372.3 y 168.9 z 324.0 ² 365.4	x 84.1 y 49.0 z 91.0 ² 73.8	x 33.8 y 23.4 z 37.9 ² 33.1	x .23 y .03 z .20 2.11	x 62.7 y 17.2 z 50.3 ² 31.7	x 3,433 y 3,595 z 3,145 ² 2,652	x 2,333 y 2,253 z 1,988 ² 1,506	x .07 y .18 z .17 2.26	x 231 y 236 z 183 ² 292	x 108 y 101 z 79 ² 237	x 90 y 122 z 92 ² 264		
CS 10+62	Tt 4K	do.	1.88	1.73	2.48	2.03	30	8	23.9	30	x 193.1 y 151.7 z --- ² 275.8	x 32.4 y 37.9 z 39.3 ² 62.7	x 13.1 y 14.5 z 17.2 ² 28.3	x .26 y .32 z .12 2.12	x 35.2 y 35.2 z 17.2 ² 27.6	x 2,810 y 2,739 z 3,234 ² 2,463	x --- y --- z --- ² 2786	2.44	230	210	289		
CS 9+56	Tt 4J	do.	---	1.40	2.53 ¹ 2.35	1.95 ¹ 1.76	45 ¹ 40	---	7.5	11	---	---	---	---	---	---	---	---	---	---	---	---	
CS 9+22	Tt 4J	do.	2.04	1.79	2.47	2.07	27.5	12	11.0	23	x 82.7 y 103.4 z 82.7 ² 248.2	x 19.3 y 29.0 z 28.3 ² 49.0	x 8.3 y 11.7 z 9.7 ² 22.8	x .21 y .24 z .49 2.07	x 12.4 y 18.6 z --- ² 19.3	x 3,970 y 3,211 z 3,018 ² 2,502	2954	2.41	243	215	286		
CS 8+22	Tt 4J	do.	1.89	1.49	2.40	1.87	38	21	9.4	25	x 141.3 y 31.0 z 113.8 ² 158.6	x 43.4 y 9.7 z 42.7 ² 20.0	x 17.2 y 3.4 z 17.9 ² 29.0	x .29 y .34 z .19 2.13	x 34.5 y 9.7 z 22.8 ² 29.7	x 2,574 y 2,576 z 2,406 ² 2,128	2872	2.40	230	210	249		
CS 7+25	Tt 4J	do.	2.00	1.71	2.55	2.04	33	14.5	11.1	21	---	---	---	---	---	---	---	---	---	---	---	---	
CS 6+94	Tt 4H	do.	1.75	1.39	2.37	1.80	41	21	16.8	27	---	---	---	---	---	---	---	---	---	---	---	---	
			---	---	¹ 2.43	¹ 2.01	¹ 30	---	² 22.8	---	2110.3	221.4	29.7	2.15	210.3	x 3,032 y 1,396 z 2,478	---	---	---	---	---	---	
			---	---	¹ 2.26	¹ 1.77	¹ 38	---	² 28.7	---	x 162.7 y 179.3 z 75.8 ² 213.7	x 26.9 y 32.4 z 18.6 ² 31.0	x 11.0 y 12.4 z 6.9 ² 14.5	x .24 y .31 z .33 2.09	x 17.2 y 28.3 z 18.6 ² 14.5	x 2,063 y 2,283 z 2,402 ² 21,951	x 1,352 y --- z --- ² 2936	.22 2.35	78 231	32 212	46 234		

¹Measured by kerosene-saturated method.
²Measured on dry core.